Manpower analysis work load data preparation guidelines

1. As specified in DoDD 1100.4, Guidance for Manpower Management, a key precept underlying manpower management in the Department of Defense is that "manpower requirements are driven by workload and shall be established at the minimum levels necessary to accomplish mission and performance objectives.

2. Changes in manpower shall be preceded by changes to the programs, missions, and functions that require manpower resources." Accordingly, a major element of ASA(M&RA)'s review of a TDA Concept Plan (CP) is to verify that any requested changes in manpower requirements are in fact supported by mission and workload.

3. Therefore, it is imperative that the requesting activity ensure the workload rationale, data, and analysis are accurately documented to justify the manpower requirements.

4. USAMAA is the acting agent on behalf of ASA (M&RA) for this part of the review.

5. There are two key areas that a CP must address in terms of mission and workload for requested changes in manpower requirements: the mission directive from HQDA level or higher that forms the basis for the overall change; and the workload analysis that led to the specific manpower requirements changes.

6. In addition, the proposed military-civilian-contractor delineation of the requirements must reflect the least costly manpower mix able to accomplish the mission and must be consistent with current manpower mix law and policy.

7. Additional information on manpower mix can be found in policies and statutes at http://www.asamra.army.mil/scra.

Mission directive

1. Concept plans documenting changes resulting from new mission assignments should cite—and include a copy of—the specific directive (*e.g.*, HQDA memorandum, OPORD/FRAGO/EXORD, etc.).

2. CPs documenting changes due to workload growth in an existing assigned mission should cite the official authoritative source for the mission (e.g., the specific paragraph in the AR that originally assigned the mission), and provide a complete explanation of the basis for the workload growth. For example:

(1) In a production-type environment (*e.g.*, depot, arsenal, installation maintenance activity, warehouse, classroom, training area, etc.), identify the specific basis for the increased throughput or increased cycle time.

(2) In a customer service environment (*e.g.*, ID card office, Army Community Services office, patient-care facility, central issue facility, etc.), identify the basis for the increased demand or increased customer base. For population-based activities, identify the specific source of any population increases, to include the losing location of any population shifts.

(3) In a staff-support environment (*e.g.*, a headquarters staff element, a proponency office, etc.), provide a clear explanation of the changed or expanded mission which led to the requested change.

3. The CP must present an analytical workload analysis argument using empirical data to relate the mission essential workload of the organization to the total amount of manpower required to accomplish that workload. Workload is defined as the major output, product produced or service provided by a working element, normally a work center. Any analytically-based method is acceptable as long as it adequately describes the workload, processes and hours that generate the manpower requirements.

4. The following specific guidance applies to presentation of workload analyses in CPs:

(1) Workload analyses must justify the workload performed by the total manpower (military, civilian, contractors) required within a functional area in the affected work center(s), not just the changes or additional requirements. A work center is defined as the basic working element organized to accomplish a specific function or similar functions. It is normally a TDA paragraph, i.e. team, branch, or division. Specifically, workload analysis is required for all existing requirements that have similar functions as the new requirements being requested.

(2) If similar functions cross multiple work centers, the entire function should be accounted for at the aggregate level to determine the necessity of additional requirements. This step will provide the work center leadership better visibility of current assets and determine whether requesting additional requirements is indeed the solution. Examples are as follows:

(a) When requesting an additional Ammunition Specialist, workload should be provided for all Ammunition Specialists currently supporting the effort rather than workload for the one requested position.

(b) When requesting an additional Paralegal, workload should be provided for all paralegal personnel currently supporting the effort. Workload for the attorneys, administrative support personnel or legal administrator would not be required.

5. CPs should develop manpower requirements from a bottom-up mission/function/process/workload analysis. This means, based on the validated

mission, all major functions required to accomplish that mission must be identified. Subsequently, for each of these major functions, the primary processes and associated tasks must be determined in order to produce the necessary workload. The processes and associated tasks should be comprehensive but not necessarily exhaustive; identify the major tasks within the processes that comprise the bulk of the workload, with sufficient detail to enable an analyst who is unfamiliar with the function to understand the process and associated tasks.

6. Excel spreadsheets can then be used to organize the mission, function, process, and workload analysis and document manpower requirements. A suggested method follows:

7. *Input-Process-Output Analysis (IPOA) Sheet.* A process map is developed for each function that includes the workload (product). The work center must be able to explain the process or processes involved with each function (see Figure 1). The completed IPOA Sheet should answer the following questions:

(1) What are the major functions? (MAJOR FUNCTIONS)

(2) Who provides the information necessary to initiate an action on your part? (Who is your supplier?) (WHO)

(3) What is the input (mission mandate) received that drives your workload? (WHAT)

(4) What actions are taken to develop the final product? How is the product developed? (PROCESS/SUB-ACTIVITY)

(5) What form/product does the process result in? (WORKLOAD/OUTPUT)

(6) Who is the workload (output) delivered to/developed for? Who is your customer? (TO WHOM)

8. *Functional Analysis.* For each major function/process-sub-activity identified on your IPOA sheet, an estimate is made (or historical data is used) to determine “how long” it takes to perform each process-sub-activity (task) one time and the frequency (“how often”) each task is performed within a given period of time (normally a year). Alternatively, a workload driver, a programmable metric that has a meaningful influence on the amount of workload, can be used here. For example, if the task is to respond to and complete work orders, the corresponding workload may be the number of work orders that are responded to (in a given year); the workload driver may be the number of assigned customers—the more customers, the more expected work orders.

9. *Functional Analysis Worksheet.* The IPOA data with the functional analysis is recorded on the Functional Analysis Worksheet (Figure 2) where Frequency, Period and Per Accomplishment Time (PAT) are multiplied to determine the Total Work Hours it takes to conduct each particular task in a given time period. The times for all tasks are totaled, and divided by the Army availability factor—normally 1740 hours—and rounded

off to determine the man-year requirements necessary for the given function. This procedure must be completed for each major function. Note that the task times, also called PAT and frequencies must be reasonable and/or rationale for each of these numbers must be provided in the CP. Regardless of the approach taken, no workload analysis spreadsheet can stand-alone; it must be accompanied by a full explanation of the mission/regulatory underpinning for each function and task, and the basis for the numbers provided.

10. In instances where the approach described above may not be feasible (*e.g.*, a new organization for which no performance data exists), activities may choose to develop manpower requirements by comparing the workload, size, and structure of the proposed organization to the approved manpower requirements of a similar organization elsewhere. When using this type of comparative analysis, the CP must include a full explanation of the underlying analysis, the basis for selecting the organization against which to compare, an explanation of similarities and differences between the two organizations, and the specific rationale used to determine the size and structure of the proposed organization.

11. When a manpower model (including staffing ratio or allocation rule) is used to justify the requested changes in manpower, organizations should provide a description of the model, a copy of the approval/validation memorandum from USAMAA, and an explanation of how and why it is being applied or reapplied to justify the changes. Note that a model approved by USAMAA for use by a specific organization is normally not appropriate for application by another organization. Often, the use of an approved and validated manpower model does not require the submission of a CP, but rather, is handled using other means, directly with G3-FM. Activities contemplating the use of a valid and approved manpower model or manpower study as the basis for computing updated manpower requirements in a CP should contact their assigned USAMAA Command Analyst for guidance before proceeding. See USAMAA website at the following for reference: http://www.asamra.army.mil/usamaa/index.cfm.

12. For proposed TDA augmentations (AUGTDA) to MTOE, it is particularly important that CPs address the rationale for needing manpower requirements beyond those documented in the MTOE itself. It is not sufficient to merely state that the MTOE cannot support the workload. The CP should provide a clear explanation of the doctrinal workload that provided the basis for the MTOE requirements for the function in question, explain the origin and basis for additional workload not accommodated by the doctrinal MTOE requirements, and include an analysis of the workload of the total work center (combined MTOE/AUGTDA), not just the AUGTDA requirements being requested.

13. In instances where all or part of the workload associated with a CP is being accomplished through use of overtime, over hires, troop diversions, borrowed labor, contract, or other means, the CP should provide a full explanation of these circumstances. This information is necessary to identify and clarify the use of “other personnel” to accomplish enduring workload. More importantly, the CP should reflect the associated man-hours contributed to the work center to develop the workload-to-

manpower requirements relationship necessary to support the changes being requested.

14. In instances where long-term unacceptable backlog or unacceptably long cycle times/customer wait times form the basis for requesting increased manpower requirements, the CP should provide the basis for computing the backlog, identify specific negative impacts resulting from the continuing backlog, and identify the steps that have been taken within the work center to resolve the unacceptable backlog by means other than increased permanent staffing, e.g., process improvements.

15. The instances and examples cited above are not intended to be all-inclusive. Activities preparing CPs may take whatever approach works best in their particular case, but should ensure that they include a full explanation, supporting rationale, all pertinent data, and all applicable computations with the CP. Regardless of the approach taken, submitting activities should keep in mind that it is their responsibility to make a complete and compelling case for the changes they are requesting. This is best done by linking a specific mission directive to a set of revised manpower requirements using a sound analytical argument, well supported by empirical data, and clearly explained in unambiguous, non-technical, jargon- and acronym-free language.

INPUT-PROCESS-OUTPUT ANALYSIS SHEET

Work Center Products, Processes, and Relationships

INSTRUCTIONS:	When completing the spreadsheet below, focus on answering the following questions:
MAJOR FUNCTIONS	What are the major functions that support your organization's mission
WHO	Who provides the information necessary to initiate an action on your part? (Who is your supplier?)
WHAT	What is the input (mission mandate) received that drives your workload?
PROCESS	What actions are taken to develop the final product? How is the product developed?
WORKLOAD (OUTPUT)	What form/product does the process result in?
TO WHOM	Who is the workload (output) delivered to/developed for? Who is your customer?

MAJOR FUNCTION	*WHO*	*WHAT*	*PROCESS/SUB-ACTIVITY*	*WORKLOAD (OUTPUT)*	*TO WHOM*
#1 Manage the Efficiency Report Program for the Command	HQDA, G1	AR 623-3, Personnel Evaluation, DA Pam 623-3	* Assess/Analyze Programs * Review Program Guidance * Develop Revised Guidance * Coordinate Revised Guidance * Publish Guidance	Published Policies and Procedures	G1, HR, Command
#2 Monitor the Military Awards Program for the Command	HQDA, G1	AR 600-8-22, Military Awards	* Review Metrics * Assess/Analyze Programs * Refine Program Guidance * Update Metrics	Monthly Report	G1, HR, Subordinate Command
#3 Manage the Internal Control Program	OSD	Assurance of Federal Stewardship	* Assign & Appoint * In-Process & Train * Evaluate & Maintain * Retain & Separate * Staff Annual Assurance Statement * Update Guidance for Command	Annual Assurance Statement	SECARMY

****** Remainder Omitted ******

Figure 1 - Input-Process-Output analysis sheet

	Functional Analysis						
	Organization: XXXX						
	Work Center: Program Management Branch						
	MAJOR FUNCTIONS/PROCESS-SUBACTIVITIES (from Input-Process-Output Analysis Sheet)	**Workload**	**# of personnel (crew size)**	**Freq**	**Period**	**Per Accomplishment Time (Hours)**	**Total Work Hours**
1	Manage the Efficiency Report Program for the Command	Published Policies and Procedures					
1.1	Assess/Analyze Programs	2 budget execution reports	1	2	Month	8	192
1.2	Review Program Guidance	1 regulation	1	1	Quarter	24	96
1.3	Develop Revised Guidance	1 guidance update	1	1	Year	80	80
1.4	Coordinate Revised Guidance	1 regulation	1	1	Year	20	20
1.5	Publish Guidance	1 regulation	1	1	Year	80	80
2	Monitor the Military Awards Program for the Command	Monthly Report					
2.1	Review Metrics		1	2	Month	8	192
2.2	Assess/Analyze Programs		1	1	Quarter	36	144
2.3	Refine Program Guidance		1	1	Year	24	24
2.4	Update Metrics		1	1	Year	24	24
3	Manage the Internal Control Program	Annual Assurance Statement					
3.1	Assign & Appoint	40 unit evaluators	1	1	Year	160	160
3.2	In-Process & Train	1 week long course taught	2	1	Quarter	40	320
3.3	Evaluate & Maintain	40 metrics	1	1	Quarter	16	64
3.4	Retain & Separate	40 unit evaluators	1	1	Year	24	24
3.5	Staff Annual Assurance Statement	1 report	2	1	Year	24	48
3.6	Update Guidance for Command	1 manual	1	1	Year	40	40
							1508
							1740
	Requirements needed						**.86 ~ 1**

Workload = Output
Frequency = How often the workload is generated in the lowest period i.e. daily, weekly, monthly, etc.
Period = Provides the mulitipler for the Freq - Daily * 251, Weekly * 52, Monthly * 12, Quarterly * 4, Annual * 1
Per Accomplish Time = The hours it takes to generate one unit of workload

Figure 2 - Functional analysis worksheet

Army command, Army service component command, or direct reporting unit role

1. CPs originating in functional staffs or subordinate activities within an Army Command (ACOM), Army Service component Command (ASCC), or Direct Reporting Unit (DRU) should be thoroughly reviewed by the ACOM/ASCC/DRU headquarters staff element having responsibility for manpower requirements before submission to HQDA. CP documentation should provide contact information for both the functional POC and the headquarters-level manpower requirements POC.

2. If, during the course of ACOM/ASCC/DRU review, changes are made to the manpower requirements in a CP, the body of the CP and all impacted enclosures should be revised to reflect those changes so it remains a complete, stand-alone document fully reflecting the command's position.

3. ACOM/ASCC/DRU should keep in mind that CP approvals—particularly those for changes based on projected workload—often carry with them a requirement that a full manpower review be conducted within a specified length of time following implementation. ACOM/ASCC/DRU should be prepared to add such studies to their 5-year schedule, and then execute and forward those studies for ASA (M&RA) review and validation.